



# **Toward Population-Based Post-Deployment Health Care** ★



# ***Why Focus On Post-Deployment Health Care?***

**(“Isn’t it just ‘routine health care’ in a slightly different uniform?”)**



**“One look before is better  
than two behind.”**

**Irish Proverb**



# ***A Unique Phenomenon?***

## **Post-War & Post-Deployment Syndromes**

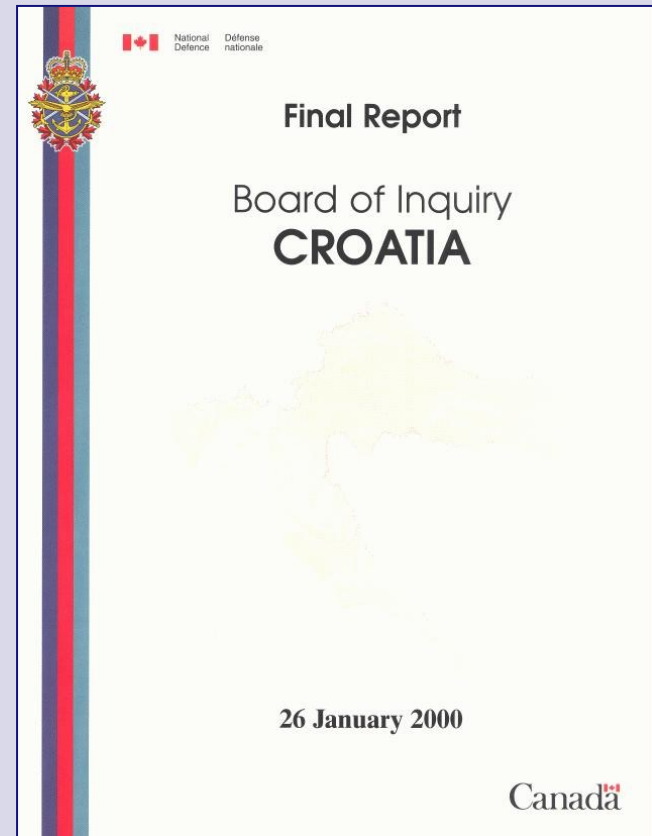
- ♠ “Poorly understood war syndromes have been associated with armed conflicts since at least the US Civil War.”
- ♠ “...war syndromes have involved fundamental, unanswered questions about the importance of chronic somatic symptoms...”

**Hyams et al. *Ann Intern Med*  
1996;125:398**

# ***A Unique Phenomenon?***

“Soldiers claim ill  
health after contact with  
contaminated soil in  
Croatia”

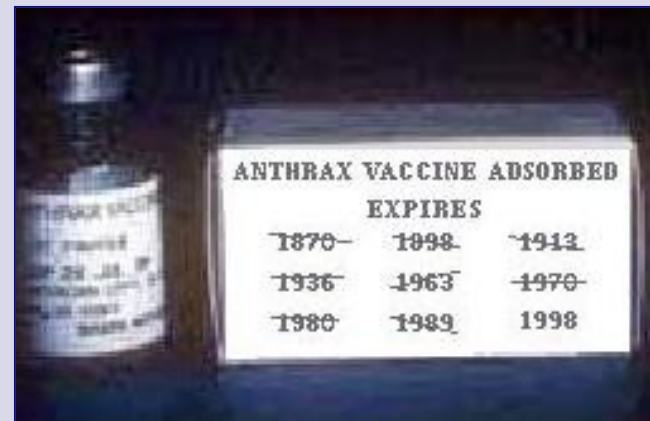
- **Lancet, Aug, 1999**





# ***A Unique Phenomenon?***

“Dover airmen report myriad ill effects from anthrax shots: one in four detail adverse reactions in pilot’s informal survey” - **Air Force Times**, April 17, 2000



# ***A Unique Phenomenon?***



## **THE SUNDAY TIMES**

April 16 2000

BRITAIN

### **Ailing troops sue over Balkan war syndrome**

SOLDIERS who served in the former Yugoslavia plan to sue the Ministry of Defence (MoD) after suffering chronic health problems they believe were caused by "***Balkan war syndrome***", writes Lois Rogers.

Doctors link their symptoms to exposure to depleted uranium in anti-tank missiles used during the Kosovo conflict. Research has shown that the heavy metal causes . . .

# ***A Unique Phenomenon?***

**“Dutch Government Decides to Treat Battlefield as a Hazardous Workplace”**

**1980s**

Peacekeepers in Lebanon

**1992-3**

***“Jungle Disease”*** among 2900  
peacekeepers in Cambodia

**1995-6**

Peacekeepers in Bosnia – 350 of  
1300 individuals ill with  
respiratory, gastrointestinal, and  
dermatological problems

**Wall Street Journal  
April 7, 2000**



# ***A Unique Phenomenon?***

## **Russian Troops Face “Chechnya Syndrome”**

### **Many Return Dysfunctional From War**

NIZHNY NOVGOROD, Russia -- In a rehabilitation center in this city on the Volga River, 500 men have been treated during the past six months for similar symptoms: restlessness, sleeplessness, hostility and unexplained physical illnesses. Some hear voices; others are reluctant to speak. Psychologists call it the "Chechnya syndrome." Its sufferers are veterans of the war against Chechen separatists in southwestern Russia, young men wrestling with the aftershocks of combat during Russia's third anti-guerrilla war in less than two decades.

Experts say the successive wars are creating consecutive generations of psychologically wounded Russian men. During the first Chechen war, between 1994 and 1996, hundreds of men came home scarred by violence and forsaken by an indifferent society. Only a few years before, **Russians spoke of an "Afghanistan syndrome."** Veterans returned from a decade of combat that ended there in 1989, brutalized and weakened by battlefield stress.

**Daniel Williams**  
**Washington Post Foreign Service**  
**August 6, 2000; Page A20**

# **A Unique Phenomenon?**

# **“Kelly Field Syndrome”**

Concerns of an environmental epidemic of ALS due to an allegedly contaminated air base in San Antonio Texas.

"This is about the health and welfare of those who will be left behind to endure this holocaust," said Lourdes Rodriguez, who lives near the field and is a retired Kelly worker.

Rodriguez, who also is running for the District 5 council spot, complained that when the Air Force closes Kelly in July, it will leave behind a bitter legacy of pollution and sickness for which citizens have no recourse.

**Feb 23 2001**  
**San Antonio Express-News**

**BOEING**

**BOEING**  
747

#### HORIZONTAL TAIL STRUCTURE - (747)

The mass balance weights on the outboard elevator of the 747 use depleted uranium.

The upper rudder of the 747 also uses depleted uranium for mass balance weight.

# A Unique Phenomenon?



## 1992 El-Al Boeing crash in Amsterdam



# A Unique Phenomenon?

## Pain Complaints After September 11

### Terrorism Tied to Jump in Pain Problems

By AVRAM GOLDSTEIN  
Washington Post Staff Writer

Tens of thousands of people whose chronic physical pain is usually kept in check have suffered setbacks since the Sept. 11 attacks on New York and Washington. At Washington Hospital Center, pain management specialists reported a sharp increase in pain complaints of worsening pain from patients who suffer from cancer, back problems, arthritis, diabetic neuropathy, chronic headaches and other ailments.

At Washington Hospital Center, pain management specialists reported a sharp increase in pain complaints of worsening pain from patients who suffer from cancer, back problems, arthritis, diabetic neuropathy, chronic headaches and other ailments.

The widespread reaction, they said, was clearly triggered by stress over the attacks, fear of more terrorism and concern for what the future will bring their children.

"A lot have been stable for years on their medication, but after [the attacks], we are

A6 MONDAY, OCTOBER 1, 2001

5 PM VA

#### AFTER THE ATTACKS

### For Many, Terrorist Attacks Prompt Flare-Up of Chronic Pain

PAIN. From A1

pain management at Washington Hospital Center. "Patients who normally are happy that their pain is under control are coming in in tears."

The phenomenon was evident in the first week after the attacks. At George Washington University Hospital, physicians said complaints about pain and other symptoms of chronic ailments climbed abruptly.

"The medicine department was swamped with ... patients with rheumatoid arthritis, pain, asthma," said James L. Griffith, associate chairman of the psychiatry department. All kinds of chronic medical disorders were aggravated, he said.

Physicians said stress levels across the country have increased as Americans fret over the risks of bioterrorism, the ailing economy, grief for those who died and anger at the attackers.

Moreover, they said, the suffering has been amplified by insomnia, as millions of Americans stay glued to



Roberta Hagen said her pain went "out of control" as she worried about a nephew in New York.

fication. It doesn't mean they don't

stein, a rheumatologist and clinical professor of medicine at George Washington University. He said the many patients who have perceived more pain were unaware that their bodies were reacting to world events.

"When you tell people this is a natural response to a loss and stress, I think many have come to understand it and don't necessarily require additional medicines," he said. "Those more on the edge have needed more."

Judy Denny, 55, of the District, has had chronic pain in her right leg since she emerged from failed back surgery as a paraplegic four years ago. The pain has mostly been controlled with the help of her physician, Rhodes.

But the past two weeks have not gone well for Denny, who said she has felt anguish for the attack victims and fear for what the future will bring her two teenage children. After speaking with Rhodes, she said, she realized why she was in greater pain.

"I never, ever put it together before, but I have been having particular problems with my right leg in the last weeks," she said. "There are earthquakes in other countries that kill thousands of people, and we don't see that as a major thing in our lives, but when it's the Twin Towers, it really gets to you."

Roberta Hagen, a Bethesda nurse who has suffered from chronic back pain for 10 years, said her pain skyrocketed the day of the attack when her family was worrying about a nephew who worked in the World Trade Center. Even after learning that he was alive, she said, her symptoms did not ease.

"It was absolutely miserable," she said. "Obtaining information about my nephew helped, but then there was a secondary effect of sympathy for the rest of the folks who didn't survive. ... Normally, you think you have such good control, and then you find with these outside stressors [that] you lose that and the condition just goes out of control."

Physicians across the country

who treat cancer patients to report the same phenomenon.

Jessie Leak, an associate professor of anesthesiology at M. D. Anderson Cancer Center at the University of Texas in Houston, described the problem as "unprecedented" and said complaints to her have risen 33 percent. Most of Anderson's patients come from out of state, so the complaint there are representative, Leak said.

"This extraordinary event is beyond anything we normally



# SPECIAL REPORT Newsweek®

November 5, 2001: \$3.95

newsweek.msnbc.com



**DUST AND FEAR:** Doctors see an unusual number of respiratory complaints

## HEALTH Now, 'WTC Syndrome'

ing coughs and sinus infections to posttraumatic stress and acute lung traumas, including severe asthma requiring mechanical respiration.

The syndrome appears to be

vasculitis  
ease which  
caused by

No one  
the long  
a random

# ***A Unique Phenomenon?***

## **Some Common Elements**



- ♠ War, deployment or disaster
- ♠ Symptoms & concerns
- ♠ Suspicion & mistrust
- ♠ Debate regarding causes
- ♠ Inconclusive investigation
- ♠ Credibility lost (and hard to regain)



# ***A Unique Phenomenon?***

## **Health Concerns After the Gulf War**

GW veterans, compared to era-veterans show:

- ♠ No significant increase in mortality due to disease up to '99.

Writer et al, JAMA 1996; 275:118-121

Kang & Bullman, NEJM 1996; 335:1498-1504

Kang, 1999 Gulf War Investigators' Meeting, Pentagon City, VA

- ♠ No consistently increased incidence of DoD hospitalizations.

Gray et al, NEJM 1996; 335:1505-13

Knoke & gray, Emerg Infect Dis 1998; 4(2):211-19

- ♠ Significantly increased prevalence of physical symptoms and symptom syndromes

MMWR 1995; 44(23):443-447

Iowa Persian Gulf Study Group, JAMA 1997; 277:238-245

Unwin et al, Lancet 1999; 353(9148):169-78

- ♠ Significantly decreased health-related quality of life

Iowa Persian Gulf Study Group, JAMA 1997; 277:238-245

Unwin et al, Lancet 1999; 353(9148):169-78

SPECIAL INVESTIGATION

**LIFE**

The  
Tiny  
Victims  
of Desert  
Storm

Has  
Our  
Country  
ABANDONED  
THEM?

Gulf War veteran  
U.S. Army  
Sgt. Paul Hanson  
and his son,  
Jayce, age three

NOVEMBER 1995/\$3.95





# Good Technical Outcome, Poor Service Experience

## A Verdict on Contemporary Medical Care?

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Leon Eisenberg, MD

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**I**N THE CLINICAL CROSSROADS IN THIS ISSUE OF THE JOURNAL, the discussant Dr Jennifer Daley<sup>1</sup> rates the care the patient received as “good technical outcome, poor service experience.”

No one will quarrel with the accuracy of the judgment rendered, but what a sad commentary—and understatement—about what happened to the patient. Most physicians and patients, and undoubtedly Ms G herself, would prefer that result to a rating of “good service experience, poor technical outcome” after such surgery, an outcome that was commonly the case with knee surgery 20 years

ago, before orthopedic methods improved so remarkably.<sup>2</sup> Being able to take a 3-week hiking trip after knee surgery is a tribute to modern orthopedics no less than to the skill of her surgeon.

But must there be an inverse relationship between technical outcome and service experience? Clearly not. Yet public dissatisfaction with care received has been increasing in recent years despite the greater and greater proficiency of medical and surgical specialists in reducing morbidity and mortality. Why might that be so? Some dismiss

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**See also p 2629.**

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**Author Affiliation:** Department of Social Medicine, Harvard Medical School, Boston, Mass.

**Corresponding Author and Reprints:** Leon Eisenberg, MD, Department of Social Medicine, Harvard Medical School, 641 Huntington Ave, 2nd Floor, Boston, MA 02115.

# The “Service Experience” in Post-Deployment Health Care

***How Can We Do Better?***



# The Narrow Gaze of **Disease Management**



History



Exam



Testing



Diagnosis



Treatment

**W** E'VE MAPPED THE HUMAN GENOME,  
MASTERED ARTIFICIAL INTELLIGENCE,  
AND UNLOCKED THE SECRETS OF THE UNIVERSE



THE WHEEL, THOUGH, STILL  
NEEDS SOME WORK



DERING ©2004 THEATRE SYNDICATE  
ARKANSAS DEMOCRAT-GAZETTE

**“As a nation, we may be overfunding the quest for unlikely cures while underfunding research on humbler therapies that could improve people’s lives...**

**“...cures in medicine are rare, but the need for ‘care’ - attention and reassurance from approachable, sympathetic physicians and caregivers - is widespread.”**

George D. Lundberg, MD  
Former Editor, JAMA  
Newsweek Aug 27 2001, p15

# The Broader Goal

## *Collaborative Care*



The primary goal is for patient & provider to *collaborate* in a joint effort to *activate* positive health-related behaviors. The two parties *negotiate* exact & explicit behavioral goals. They *monitor* progress using behavioral indices (e.g., symptom reports, quality of life estimates, or capacity to function and fulfill roles). *Follow-up is valued*, planned, and systematic.

# How Do We Get There From Here?



- ♠ Clinical experience
- ♠ Clinically relevant research
- ♠ Collation of clinical evidence
- ♠ Evidence-based practice guidelines
- ♠ Guideline implementation
- ♠ Pragmatic studies of implementation
- ♠ Recursive cycle



# The DHCC Experience Base



## Gulf War Health Center

*Caring for America's Finest*

Walter Reed Army Medical Center





# **Centers for Deployment Health**

## **ASD(HA) Policy Letter - 30 Sep 1999**



- ♠ **Deployment Health Clinical Center**  
at Walter Reed Army Medical Center
- ♠ **Deployment Health Research Center**  
at Naval Health Research Center in San Diego
- ♠ **Deployment Health Surveillance Center**  
at Center for Health Promotion & Preventive Medicine

# DHCC Mission...

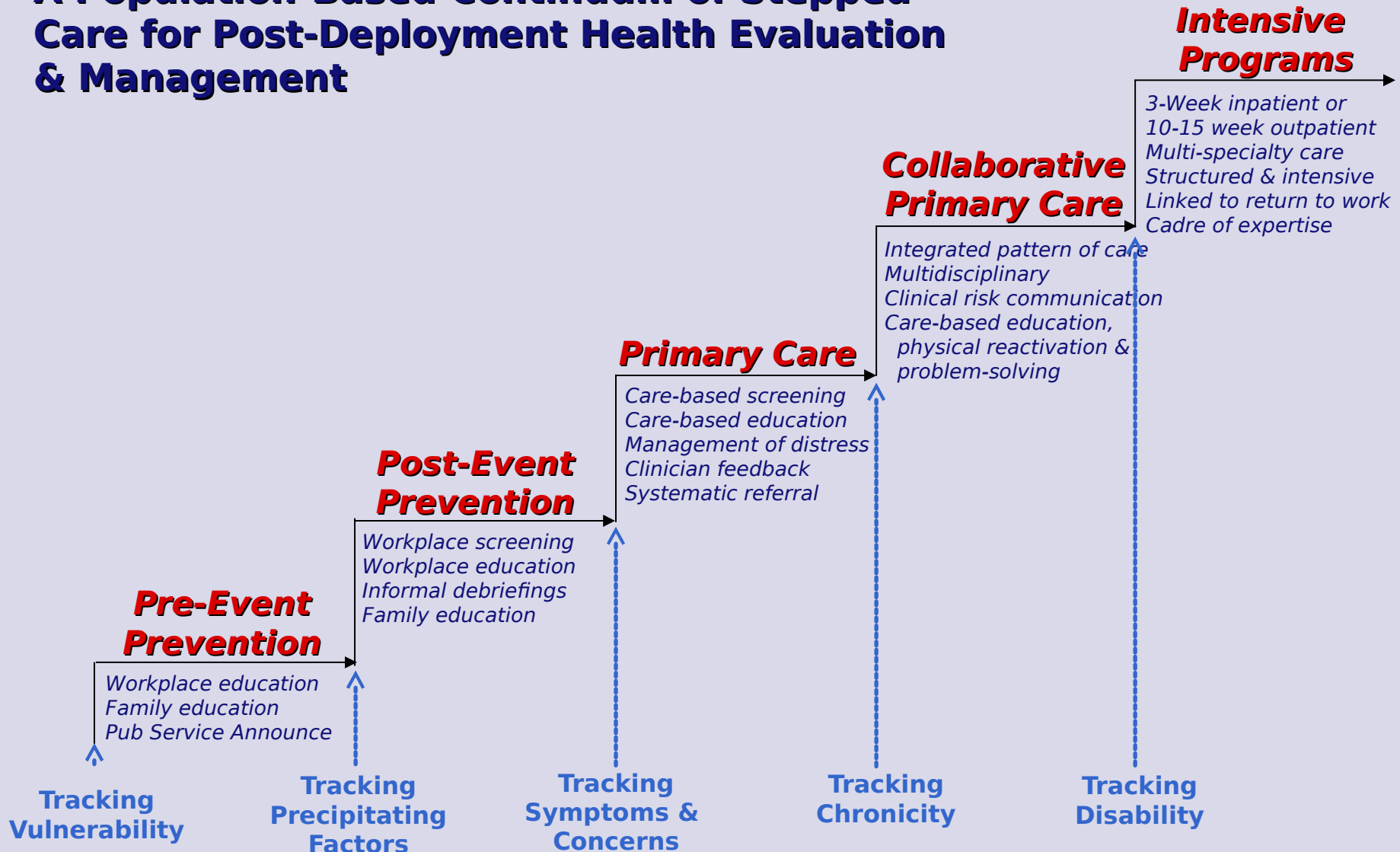
## Positive Innovations in Post-Deployment Care



- ♠ **Deliver** primary & tertiary post-deployment health **services**
- ♠ **Foster**, sustain, & improve supportive use of health **information** systems
- ♠ **Provide** a **patient-centered** post-deployment services **research** program
- ♠ **Support clinicians** seeking to improve post-deployment services & related clinical skills

# ***The Overall DHCC Objective...***

## **A Population-Based Continuum of Stepped Care for Post-Deployment Health Evaluation & Management**



# Deployment Health Clinical Center

DoD Center of Excellence for Post-deployment Care



## **Program Integration**

**WWW Info Dissemination  
Clinician Support  
Planning & Program Development**

### **Service Delivery**

**Referral Services  
Clinical  
Prevention  
Risk Management**

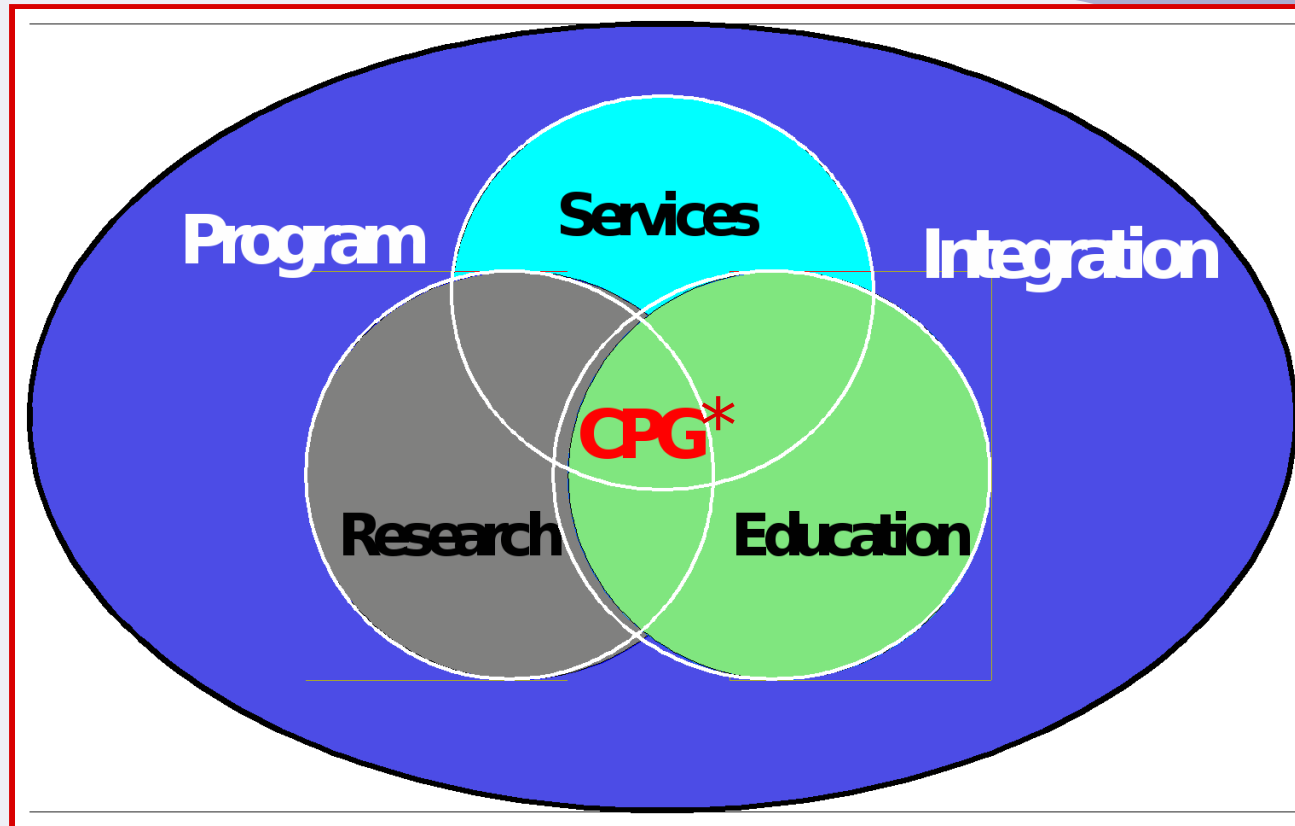
### **Research**

**Services Research  
Multicenter Trials  
Clinician  
Communication**

### **Education**

**Patient  
Provider  
Public**

## DoD Center of Excellence for Post-deployment Care



\* **CPG** = PDHealth Clinical Practice Guideline



**REVIEW OF THE  
DoD-VA CLINICAL PRACTICE GUIDELINE ON  
*POST-DEPLOYMENT HEALTH  
EVALUATION & MANAGEMENT***

# Introduction To Guideline Features

- ♠ Military-unique **vital sign**
- ♠ Use of a **stepped care** approach
- ♠ Clinically-based **risk communication**
- ♠ Web-based **clinician support**
- ♠ Longitudinal **follow-up** guidance
- ♠ Outcomes **monitoring**
- ♠ Supporting **Center of Excellence**

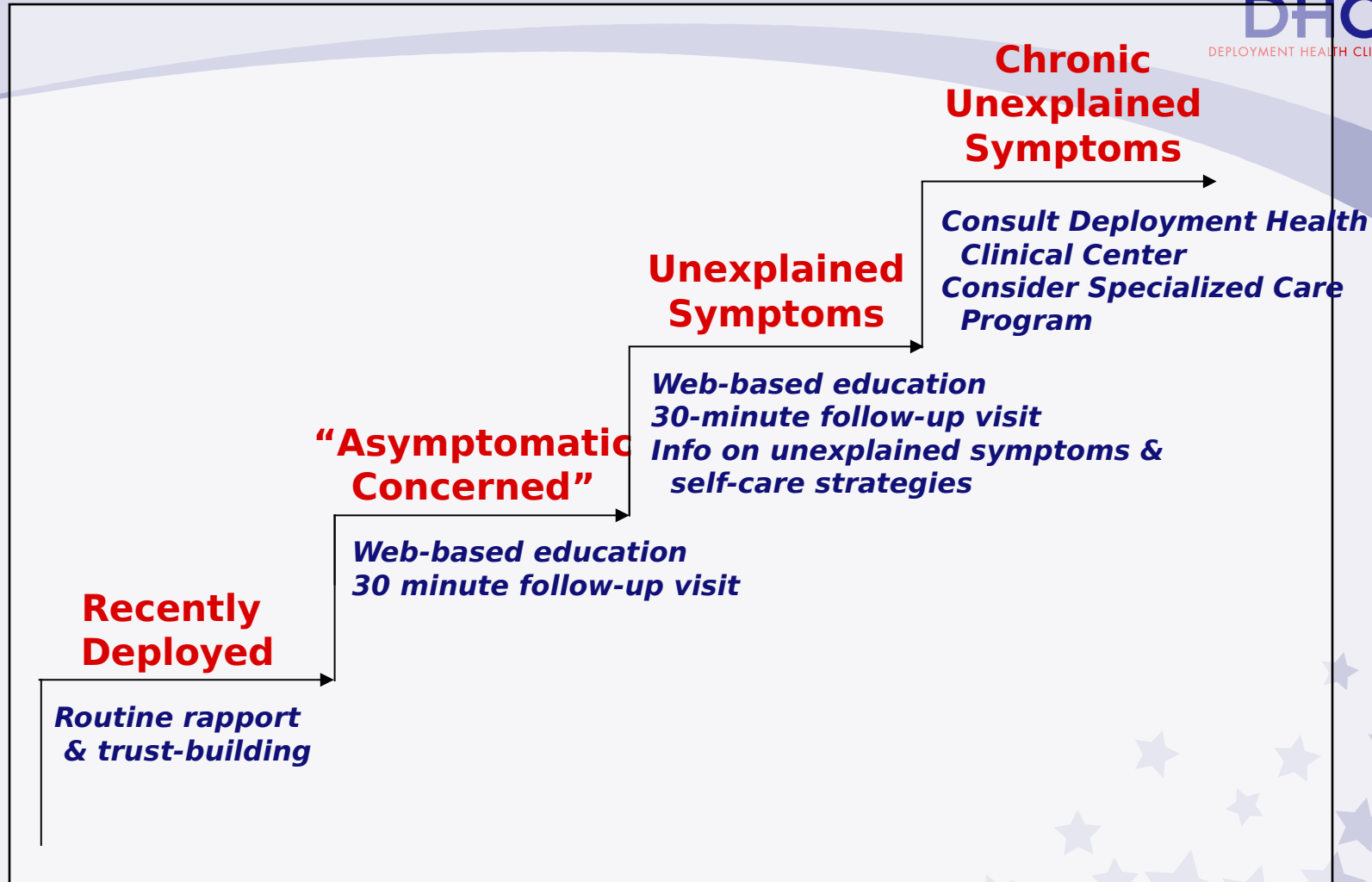
# Military Unique Vital Sign

**“Is the issue causing you to seek care today related to a deployment?” (yes-no-maybe)**

- ♠ CPG: vital sign for all care contacts except wellness visits (e.g., periodic examinations, preventive care)
- ♠ Patient rather than clinician determination
- ♠ 1-2% of patients say ‘yes’



# A Clinically-Based & Appropriately Stepped Risk Communication Strategy



PDHealth.mil



## DoD Post-Deployment Health

For Clinicians

For Veterans & Families

About this Site

Education & Training

Related Sites/Links

Glossary & Acronyms

Guidelines

Guideline Broadcast

Search 

Search Tips

**Welcome** to Department of Defense Post-Deployment Health. Place your cursor over a button for more information on that section.

[Contact DHCC](#) | [Privacy & Security](#) | [Site Map](#) | [Help&FAQs](#) | [Disclaimer](#)

***<http://www.PDHealth.mil>***

# Site Features

- ♠ Covers all deployments since 1990
- ♠ Adheres to “two-minute rule”
- ♠ Contains a web-navigable version of new post-deployment clinical practice guidelines
- ♠ Structured PubMed (NLM Medline) searches
  - Clinically relevant deployment-related scientific medical literature
  - Covers various exposures of military concern

# Site Features (Continued)

- ♠ **“What your patients may be reading...”**
  - Unfiltered deployment-related media literature
  - Helps anticipate patient concerns and questions
- ♠ **Information to offer concerned patients**
- ♠ **Announcements regarding relevant continuing education & training**
- ♠ **Regularly updated feature: “War on Terrorism”**
- ♠ **Specific diseases and concerns**

# Outcome Measurement Tools Available on *PDHealth.mil*

## ♠ Short Form 36 version 2 (SF-36v2)

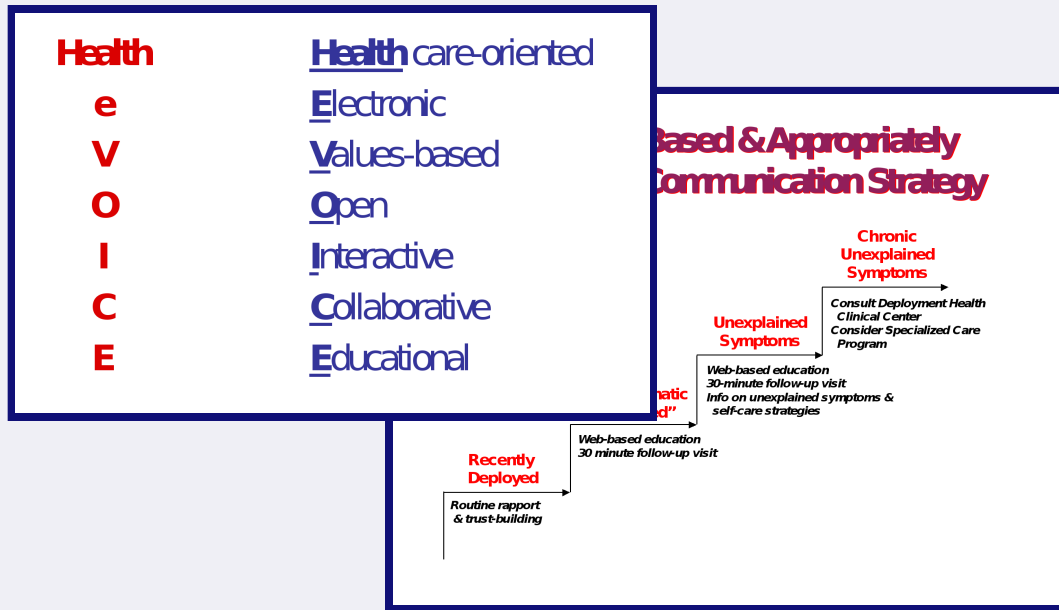
A short measure of health-related quality of life. Applicable to patients with any health condition or concern. *PDHealth.mil* offers web-based administration & scoring.

## ♠ Patient Health Questionnaire (PRIME-MD)

A rapid measure of common, disabling, and treatable mental disorders for clinical use in primary care settings. Useful as a diagnostic and outcome assessment tool. Available on *PDHealth.mil* for downloading.

## ♠ Posttraumatic Stress Disorder Checklist (PCL-S)

A brief measure of the cardinal symptoms of PTSD. Can be used for screening and longitudinal monitoring. Available on *PDHealth.mil* for downloading.



# “Health-e VOICE”

A CDC-funded Project To Develop & Evaluate An Online Continuing Education Tool That Aims To Optimize Guideline-Directed Clinical Risk Communication



# A DoD Center of Excellence

## Deployment Health Clinical Center & Specialized Care Program



Dr. Charles Engel, left, sitting with wife, Pat, is seen at graduation ceremony from Walter Reed rehabilitation program.

### Soldiering On in the Face of Pain

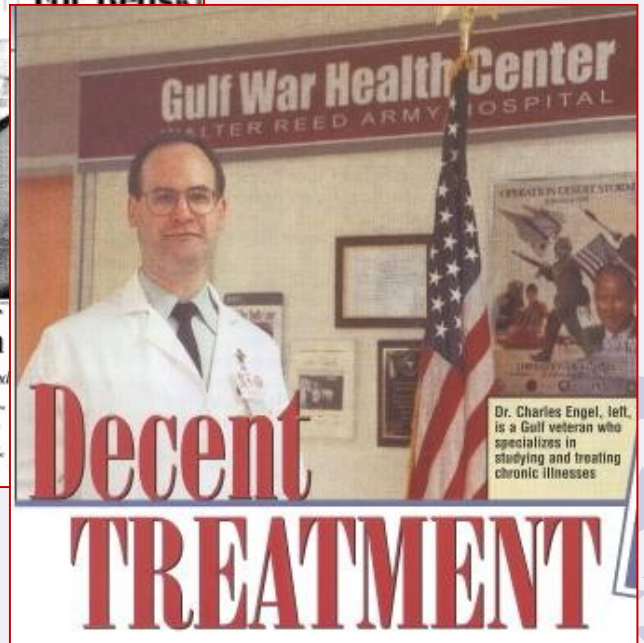
Veterans Help Invent a Plan of Attack for Their Medical No Man's Land

Second of two articles  
by Charles Engel  
Continued from Page 1

you today." Army Sgt. Arlo Downing says he has given up a military life to help lead Sgt. "Big" Trapp and White, "We're going to build on it."

"I don't want you to know what you're doing," Downing says. "I don't want you to know what you're doing."

Downing is a Gulf War veteran who has been in the medical field for 10 years. He is currently a medical officer at the Walter Reed Army Medical Center.



# **The Specialized Care Program**

## **A Worldwide Referral Care Resource**



**DoD Deployment Health Clinical Center 866-559-1627**  
**Walter Reed Army Medical Center 202-782-6563**  
**Building 2, Room 3G04 DSN: 662**  
**6900 Georgia Ave, NW [pdhealth@na.amedd.army.mil](mailto:pdhealth@na.amedd.army.mil)**  
**Washington, DC 20307-5001**



# Services Research VA-DoD Multicenter Trials

## Collaborating with VA Cooperative Studies Program to achieve a DoD **clinical health policy research** capability

Currently Three Ongoing CSP Trials...

- ♠ CSP 470: Exercise – Behavioral Therapy for CMI  
20 sites – ~1,100 subjects – Completion: Jan 02
- ♠ CSP 475: Antibiotic Therapy for CMI  
30 sites – ~ 500 subjects – Completion: Jan 02
- ♠ CSP 494: Psychosocial Care for Women with PTSD  
12 sites – ~ 500 subjects – Completion: Jan 05

# Other Research Directions

## ♠ **Mechanistic studies on MUPS...**

Cooperative agreement with Georgetown  
Center for Chronic Pain & Fatigue Research

## ♠ **Services research testing the utility of...**

VA-DoD post-deployment CPG

VA-DoD major depression CPG

VA-DoD Unexplained Symptoms CPG

Clinical risk communication strategies

**“Unless...wars are fought solely by machines, the human cost of warfare will remain high. The troops must... be given a commitment for all necessary care for war-related illness.”**

**Straus SE: Lancet 1999; 353:162-3**

